

WHAT IS CLAIMED IS:

1                   1.     A device driver for a network device controller for selectively  
2     controlling an end device in a control network, said device driver comprising:  
3                   first means for selecting a plurality of first output signals from a plurality of  
4     first input signals;  
5                   second means for selecting at least one second output signal from said  
6     first output signals; and,  
7                   third means for selecting an operating mode of the end device from a  
8     plurality of predefined operating modes based on said second output signal.

1                   2.     The device driver as defined in claim 1 wherein said first selecting  
2     means includes a plurality of input selectors, each having a plurality of inputs and an  
3     output, said second selecting means includes at least one intermediate selector having  
4     a plurality of inputs and an output, and said third selecting means includes an output  
5     selector having a plurality of inputs and an output.

1                   3.     The device driver as defined in claim 2 wherein said output of each  
2     of said input selectors are connected to said plurality of inputs of said at least one  
3     intermediate selector, and said output of said at least one intermediate selector is  
4     connected to said output selector for selecting said operating mode.

1                   4.     The device driver as defined in claim 3 wherein said output of said  
2     at least one intermediate selector is input to a switch and an output of said switch is  
3     connected to said output selector for selecting the operating mode, when there are more  
4     than one said at least one intermediate selector.

1                   5.     The device driver as defined in claim 1 wherein said plurality of  
2     predefined operating modes include a first operating mode in which the end device is  
3     operated at any point from a first mode to a second mode.

1           6.     The device driver as defined in claim 5 wherein said plurality of  
2 predefined operating modes include a second operating mode in which the end device  
3 is operated at said first mode or said second mode.

1           7.     The device driver as defined in claim 6 wherein said plurality of  
2 predefined operating modes include a third operating mode in which the end device is  
3 operated at said first mode.

1           8.     The device driver as defined in claim 7 wherein said plurality of  
2 predefined operating modes include a third operating mode in which the end device is  
3 operated at said second mode.

1           9.     The device driver as defined in claim 2 wherein said plurality of  
2 input selectors are connected to a first common input select signal for selecting said first  
3 output signals, and said at least one intermediate selector is connected to second a  
4 common input select signal for selecting said second output signal.

1           10.    The device driver as defined in claim 1 wherein each of said  
2 plurality of first input signals corresponds to one of said predefined operating modes.

1           11.    A method of selectively controlling a end device in a control  
2 network, said method comprising the steps of:

3                selecting a plurality of first output signals from a plurality of first input  
4 signals;

5                selecting a second output signal from said plurality of first output signals;  
6 and

7                selecting an operating mode of the end device from a plurality of  
8 predefined operating modes based on said second output signal.

1           12.    The method as defined in claim 11 wherein said plurality of  
2 predefined operating modes include a first operating mode in which the end device is  
3 operated at any point from a first mode to a second mode.

1           13. The method as defined in claim 12 wherein said plurality of  
2 predefined operating modes include a second operating mode in which the end device  
3 is operated at said first mode or said second mode.

1           14. The method as defined in claim 13 wherein said plurality of  
2 predefined operating modes include a third operating mode in which the end device is  
3 operated at said first mode.

1           15. The method as defined in claim 14 wherein said plurality of  
2 predefined operating modes include a third operating mode in which the end device is  
3 operated at said second mode.

1           16. A controller for controlling a plurality of end devices in a control  
2 network, comprising:

3           a space controller for monitoring and receiving data from a space being  
4 maintained by the controller;

5           At least one device driver in communication with said space controller and  
6 operatively connected to a corresponding one of the end devices, for selecting an  
7 operating mode of said corresponding end device from a plurality of predefined  
8 operating modes; and,

9           a supervisory controller in communication with said space controller and  
10 said at least one device driver for supplying signals corresponding to said plurality of  
11 predefined operating modes to said device driver for selecting said operating mode of  
12 said corresponding end device;

13           wherein said device driver includes,

14           first means for selecting a plurality of first output signals from said  
15 signals corresponding to said plurality of predefined operating modes;

16           second means for selecting a second output signal from said first  
17 output signals, and,

18           third means for selecting said operating mode of said corresponding  
19 end device based on said second output signal.

1           17. The controller as defined in claim 16 wherein said first selecting  
2 means includes a plurality of input selectors, each having a plurality of inputs and an  
3 output, said second selecting means includes at least one intermediate selector having  
4 a plurality of inputs and an output, and said third selecting means includes an output  
5 selector having a plurality of inputs and an output.

1           18. The controller defined in claim 17 wherein said output of each said  
2 input selectors are connected to said plurality of inputs of said at least one intermediate  
3 selector, and said output of said at least one intermediate selector is connected to said  
4 output selector for selecting said operating mode.

1           19. The controller as defined in claim 18 wherein said plurality of input  
2 selectors are connected to a first common input select signal from said supervisory  
3 controller for selecting said first output signals, and said at least one intermediate  
4 selector is connected to second a common input select signal from said supervisory  
5 controller for selecting said second output signal.

1           20. The controller as defined in claim 16 wherein the control network is  
2 communicatively connected to the internet and said controller is operatively connected  
3 to a remote system controller.

1           21. A device driver for a system controller having a plurality of pre-  
2 programmed controller operating functions for controlling at least one device operatively  
3 connected to the system controller, said device driver comprising:

4           means for setting an operating mode of the device from a plurality of  
5 predetermined device operating modes;

6           means for selecting said device operating mode in accordance with a  
7 select one of the controller operating functions; and

8           means for defining said select controller operating functions based on user  
9 specified predetermined system operating modes.

1                   22. The device driver as defined in claim 21 wherein said device  
2 operating modes include,

3                   a first mode in which the device remains in an OFF state,

4                   a second mode in which the device remains in an ON state,

5                   a third mode in which the device is varied from/to said OFF state to/from  
6 said ON state, and

7                   a fourth mode in which the device is set to said OFF state or said ON  
8 state.

1                   23. The device driver as defined in claim 21 wherein said  
2 predetermined system operating modes include a first system operating mode in which  
3 the system controller is controlled based on a local operating condition of the device that  
4 is operatively connected to the system controller, and a second system operating mode  
5 in which the system controller is controlled based on a load demand that is placed on  
6 the system.

1                   24. The device driver as defined in claim 23 wherein said system  
2 controller is operatively connected to a control network and is controlled in accordance  
3 with commands from said control network when said controller is in said first or second  
4 system operating mode.